

**Notice of Allowability**

Application No.

10/697,048

Examiner

Jeffrey T. Barton

Applicant(s)

GRUEN, DIETER M.

Art Unit

1795

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed 10 October 2007.
2. ☒ The allowed claim(s) is/are 1 and 3-15.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Bradley Smith on 14 December 2007.

The application has been amended as follows:

**In the claims:**

- a. In claim 1 at line 1, please delete "[photovoltaic conversion]" and insert ~~--photovoltaic conversion--~~ before the word "multilayered".
- b. In claim 1 at line 2, please delete "[,]" and insert ~~--[,]~~ before the word "comprising".
- c. In claim 1 at line 7, please delete the word "a" and insert the word ~~--an--~~ before "n-doped".
- d. In claim 1 at line 9, please delete "[whereby]" and insert ~~--whereby--~~ before the words "and where".
- e. In claim 3 at line 1, please insert the word ~~--microcrystalline--~~ before the word "diamond".
- f. In claim 4 at line 1, please insert the word ~~--microcrystalline--~~ before the word "diamond".

- g. In claim 5 at line 1, please insert the word --microcrystalline-- before the word "diamond".
- h. In claim 6 at line 1, please insert the word --microcrystalline-- before the word "diamond".
- i. Please cancel claims 16-34.

Note that above amendments a, b, and d are made to correct issues of noncompliance. The material presented within single brackets should have been deleted by strikethrough or placing deletions of five characters or less within double brackets. All text within single brackets in the amendment of 10 October 2007 is to be deleted.

2. The following is an examiner's statement of reasons for allowance:

Claim 1 is considered allowable because of the newly added limitations to an electrode layer that is transparent and is adjacent to a transparent substrate and in contact with the n-type ultrananocrystalline diamond layer. The electrodes of Kolawa et al are not disclosed as being transparent, nor is there any reason for them to be made transparent, since the power is generated from alpha particles emitted from a layer positioned between the electrode and the diamond layers of the device. Conventional transparent conductors (e.g. ITO, doped zinc oxide, doped tin oxide) have resistivities that are much higher than metallic conductors, so a skilled artisan would not have been motivated to replace any electrode of Kolawa et al with a transparent conductor, since it would lead to a decrease in cell performance with no benefit, since the cell of Kolawa et

al does not utilize external light. The Gruen et al reference does not teach any photovoltaic structure. Therefore, no double patenting issues with the instant claims remain. For these reasons, the claims are considered patentably distinguished from the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Jeffrey T. Barton whose telephone number is (571) 272-1307. The examiner can normally be reached on M-F 9:00AM - 5:30PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:  
10/697,048  
Art Unit: 1795

Page 5

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JTB  
14 December 2007



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